

## CLAIMS

1. A channel simulator to evaluate characteristics on a single-path channel of a wireless apparatus that is a development apparatus, comprising:

5 an input section that inputs an output signal of a digital baseband processor provided in a transmission system of the development apparatus; and

a receiver noise adder that adds receiver noise simulating an SNR variation due to fading to the signal input via the input section, while keeping an entire signal level constant.

2. The channel simulator according to claim 1, wherein the receiver noise adder adds noise of a level corresponding to a level obtained by dividing a noise level by a fading variation value to the signal input via the input section.

3. The channel simulator according to claim 1, wherein the receiver noise adder comprises:

a fading variation adder that adds a level variation due to fading to the signal input via the input section;

a noise adder that adds noise to the signal input via the input section; and

a gain adjuster that adjusts a level of the signal given fading and the noise by the fading variation adder and the noise adder, using a gain that is the reciprocal of a fading variation value.

4. A channel simulator to evaluate characteristics on

a multipath channel of a wireless apparatus that is a development apparatus, comprising:

an input section that inputs an output signal of a digital baseband processor of a transmission system  
5 of the development apparatus;

a multipath signal former that forms a signal corresponding to a signal of each path from the signal input via the input section;

a fading variation adder that adds only a level  
10 variation due to fading to the signal of each path of a multipath signal;

an adder that adds the signal of each path given a fading variation;

a receiver noise adder that adds receiver noise to  
15 an added signal obtained in the adder; and

a gain controller that performs gain control such that a level of the signal provided with the receiver noise is constant.

5. The channel simulator according to claim 1, further  
20 comprising:

a second input section that inputs an output signal from an analog baseband processor provided subsequent to the digital baseband processor of the development apparatus; and

25 an analog baseband processor that converts an analog baseband signal input from the second input section into a digital baseband signal,

wherein the receiver noise adder adds a receiver noise component to the digital baseband signal obtained in the analog baseband processor.

6. The channel simulator according to claim 4, further comprising:

a second input section that inputs an output signal from an analog baseband processor provided subsequent to the digital baseband processor of the development apparatus; and

10 an analog baseband processor that converts an analog baseband signal input from the second input section into a digital baseband signal, wherein the multipath signal former forms a multipath signal from the digital baseband signal obtained in the analog baseband processor.

7. The channel simulator according to any one of claims 1 to 6, further comprising:

an analog adjuster that is comprised of a digital circuit and that adds a noise component simulating signal deterioration in a radio circuit of the development apparatus to the digital baseband signal, corresponding to an input set value.

8. A method of evaluating a wireless apparatus to evaluate performance on a single-path channel of the wireless apparatus that is a development apparatus, comprising:

adding receiver noise simulating an SNR variation

due to fading to a digital baseband signal of the wireless apparatus, while keeping a level of the signal constant; and

evaluating performance on the single-path channel  
5 of the wireless apparatus based on the signal provided with the receiver noise.

9. A method of evaluating a wireless apparatus to evaluate performance on a multipath channel of the wireless apparatus that is a development apparatus,  
10 comprising:

forming a multipath signal from a digital baseband signal of the wireless apparatus;

adding a fading variation simulating a level variation due to fading to a signal of each path of the  
15 multipath signal;

adding the signal of each path given the fading variation;

adding receiver noise to an added signal;

performing gain control on the signal provided with  
20 the receiver noise so that a level of the signal is constant; and

evaluating performance on the multipath channel of the wireless apparatus based on the signal subjected to gain control.